

## ABSTRACT OF THE DISCLOSURE

A method and system for optimizing performance in a data-over-cable system. The method includes determining parameters for data transmission on an upstream channel of the data-over-cable system, and negotiating use of the parameters. A measurement is made of a signal-to-noise ratio ("SNR") on the upstream channel. Associated with the SNR and a target packet-error-ratio ("PER") are parameters that provide optimal data throughput. The parameters, such as symbol rate, type of modulation, or amount of error correction, are used to construct a message that is sent to the cable modems. The message instructs the cable modems to reconfigure themselves to transmit according to the parameters. The reconfiguration helps ensure optimal performance.